

TECHNICAL NOTES

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TN-PLANT MATERIALS-65

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VEGETATIVE CONTROL OF MEDUSAHEAD

ABSTRACT

'Lana' vetch was broadcast seeded with phosphate fertilizer to determine the optimum seeding rate. 'Lana' vetch was successful the first year at the Jackson, California, site in controlling Medusahead when planted at 20 pounds of pure live seed per acre.

INTRODUCTION

Improved methods for the control of the invasive specie Medusahead, *Taeniatherum asperum*, are needed. Medusahead has invaded large areas of rangeland in California and western Oregon and its spread is continuing at a rapid rate. Over-seeding with 'Lana' vetch, *Vicia dasycarpa*, a self-perpetuating annual legume, appears to be a cost effective practical control (1). 'Lana' vetch can be broadcast seeded on rough terrain and established without seedbed preparation. Over-seeding with 'Lana' vetch results in improved forage quality and control of Medusahead. 'Lana' vetch is an improved variety of woollypod vetch which is a reliable self-seeding winter-active annual legume developed by the USDA Natural Resources Conservation Service Lockeford Plant Materials Center. This study evaluated three different broadcast-seeding rates of 'Lana' vetch and phosphate fertilizer applications.

METHODS AND MATERIALS

A randomized block design was used with three treatments and three replications. 'Lana' vetch was broadcast seeded at 12, 16, and 20 pounds of pure live seed (PLS) per acre near Jackson, California, (Camanche hunting club, 600 foot elevation, clay loam soil) and near Red Bluff, California, (1200 foot

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elevation, clay soil). Phosphate fertilizer with a 0-45-0 formulation was applied to all plots at the time of seeding at a 200 pounds per acre rate. The plots were 20 by 20 feet in size.

RESULTS AND DISCUSSION

'Lana' vetch exhibited poor performance at the Red bluff site. It did produce 13% ground cover by the end of the second year, which was not enough to control Medusahead.

'Lana' vetch showed excellent performance during the first year at the Jackson site. During the first year the 16 PLS pounds per acre rate had a 83.3 % average ground cover and the 20 PLS pounds per acre rate produced an 87.5 % average ground cover. 'Lana' vetch was successful during its first year of establishment and growth in controlling Medusahead. During the second year of evaluations there was a dramatic drop in the 'Lana' vetch ground cover that resulted in a lack of control of Madusahead. This decline was due to phosphate fertilizer not being applied the second year (1).

CONCLUSION

Where 'Lana' vetch is well adapted, it may be successfully broadcast seeded and used to control Medusahead in combination with applications of phosphate fertilizer. Phosphate fertilizer must be applied each year to maintain a high level of Lana vetch ground cover (1). The optimum seeding rate for Lana vetch is 20 PLS pounds per acre.

Table 1. Evaluation of 'Lana' vetch by treatments

<u>Location</u>	<u>Treatment</u> <u>(PLS #/acre)</u>	<u>Average % Cover</u> <u>(2000)</u>	<u>Average % Cover</u> <u>(2001)</u>
Red Bluff	12	3.3	5.0
	16	2.7	13.3
	20	3.0	8.3
Jackson	12	45.0	21.7
	16	83.3	20.0
	20	87.5	11.7

REFERENCES

- 1) Lana Vetch for Medusahead Control, Robert S. MacLauchlan, Journal of Range Management, Vol. 23, No 5, September 1970, pp. 351-353.